

REMARKS

This Response is made in reply to the non-final office action mailed July 24, 2008. Claims 1-19 are pending in this application. Claims 1 and 9 have been withdrawn. Claims 2-8 and 10-19 stand rejected under 35 U.S.C. §102 and §103. Applicants respectfully traverse these rejections. The Director is authorized to charge any fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 112857-453 on the account statement.

In the Office Action, claims 2-4, 6-8, 10-12, and 14-19 are rejected under §102(e) as anticipated by US 2004/0224231 ("*Fujimoto*"). Claims 2-4, 6-8, 10-12, and 14-19 are also rejected under §103(a) as unpatentable over JP 11-135115 ("*Akagi*") in view of *Fujimoto*, and claims 2-4, 6-8, 10-12, 14-16 and 18-19 are also rejected under §103(a) as unpatentable over U.S. Patent 6,242,132 ("*Neudecker*") in view of *Fujimoto*.

As the Examiner states in this non-final office action, arguments in Applicants' previous response to non-final office action were found persuasive. However, the Examiner has issued a rejection based on a new interpretation of the prior art of record. No additional prior art has been cited. The Examiner does cite US 2007/0275301 ("*Asahina* ") at paragraph [0012] for an interpretation of the term surface roughness R_y , which is used in *Fujimoto*. However, this reference is only used to describe the term R_y . It does not serve as additional prior art.

Applicant respectfully assert that no piece of art cited by the Patent Office meets each and every limitation of the claimed invention, either individually or in combination. In particular, independent claims 2 and 10 contain parallel language claiming an anode current collector having projections and the projections having an average diameter that ranges from about 3 μm to about 10 μm . Applicants assert that the limitations of projections of about 3 μm to about 10 μm are not present in *Fujimoto* or the other art.

The Patent Office has conceded that neither *Akagi* nor *Neudecker* teach current collectors having projections, so only *Fujimoto* provides any teaching for the projections. The Patent Office has asserted that *Fujimoto* teaches "the surface roughness of copper foil is 5.99 μm . See Table 1. The surface roughness R_y is the maximum height. See *Asahina* [0012]." Office Action, page 3. However, this disclosure does not meet the limitation of a projection with an average diameter of about 3 μm to about 10 μm . The value R_y in *Fujimoto* is not the same as the value of the projection in the claims because, first, the term is specifically described in the instant

specification and second, the value of $5.99\text{ }\mu\text{m}$ in *Fujimoto* is not the projection diameter as required by claims 2 and 10.

The term projection as used in the claimed invention, is described on pages 4 and 5, at the beginning of the Detailed Description. The anode has a current collector 11 that is composed of a projection 11B on the surface of a substrate 11A. Substrate 11A is described specifically as a material having a certain degree of strength and high conductivity, and can include by way of example copper, nickel etc. Projections 11B are described as a particle shape on the surface of the substrate 11A. The projections may be spherical or square shaped, but the projections 11B have an average diameter ranging preferably from about $3\text{ }\mu\text{m}$ to about $10\text{ }\mu\text{m}$.

Substrate 11A in the instant specification can be equated to the copper foil of *Fujimoto*, and projection 11B can be equated to the particles of copper deposited on the copper foil. See *Fujimoto* [0050]. In particular, on page 6 of the instant specification, a procedure for manufacturing the claimed invention describes the substrate 11A as a metal foil, and the projections 11B in a particle shape are formed on the surface of substrate 11A. This compares closely to the discussion in *Fujimoto* at [0047]-[0058], including Table 1. Substrate c is described as the copper foil. [0052]. Substrate a, cited by the Examiner, is the copper foil that has had copper particles deposited on it by electrolytic deposition. [0050].

Contrary to the Examiner's assertion, the value of $R_y=5.99\text{ }\mu\text{m}$ for Substrate a is not the diameter of the projections in the claimed invention. R_y represents the difference between peak line and trough line on a roughness curve. See *Asahina* [0012] (cited by Examiner). *Asahina* calls this the maximum height. That maximum height is calculated for the entire anode surface in *Fujimoto*, not the particle size. The particle size may form part of that total maximum height, but not the entire height. This is made clear when reviewing Table 1 in *Fujimoto*. Substrate c on Table 1 has a surface roughness $R_y=4.10\text{ }\mu\text{m}$. When the particles in *Fujimoto* are deposited on the surface of the copper, Substrate a is produced with a surface roughness $R_y=5.99$. The difference between these two values, $1.89\text{ }\mu\text{m}$, represents the largest diameter that the particles deposited on the surface, i.e. the projections, can be in *Fujimoto*. In contrast, the instant application claims that the projections must be between about $3\text{ }\mu\text{m}$ and about $10\text{ }\mu\text{m}$. The projections in the claimed invention are substantially larger than the particles disclosed by *Fujimoto*.

The remainder of the Examiner's rejections all rely on *Fujimoto* to provide limitation of projections with a diameter of 3-10 μm . Applicants respectfully assert that neither *Neudecker* nor *Akagi* teach the projections, and the Examiner has conceded this point. Applicants now further assert that *Fujimoto*, relied upon by the examiner, also does not provide that limitation. Consequently, all of the rejections relying on *Fujimoto* fail, either alone or in combination, to anticipate or make obvious independent claims 2 or 10 and claims that depend therefrom. Therefore, the rejections should be withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

BY

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Dated: October 24, 2008